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PATENT

Attorney Reference Number 6616-72626-01
Application Number 10/633,279

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An isolated nucleic acid molecule comprising a PRU promoter that comprises ~~in 3' to 5' direction~~ a nucleotide sequence comprising SEQ ID NO:1 or a fragment or variant thereof that exhibits seed-associated promoter activity when operably linked to a heterologous protein-encoding sequence, wherein the fragment or variant thereof is selected from the group consisting of:

(a) a sequence that shares at least 80% sequence identity with nucleotides 1168-1212 of SEQ ID NO:1; SEQ ID NO:7 or SEQ ID NO:10, and

(b) a sequence that shares at least 80% sequence identity with the reverse complement of nucleotides 58-101 of SEQ ID NO:1;

(c) ~~a sequence~~ a sequence that shares at least 80% sequence identity with nucleotides 1055-1127 of SEQ ID NO:1 or the reverse complement of nucleotides 140-214 of SEQ ID NO:1, operably linked to a sequence that shares at least 80% sequence identity with nucleotides 1168-1212 of SEQ ID NO:1 or the reverse complement of nucleotides 58-101 of SEQ ID NO:1; SEQ ID NO:8 or SEQ ID NO:11, wherein said PRU promoter exhibits seed-associated promoter activity when operably linked to a heterologous protein-encoding sequence

(d) a sequence that shares at least 80% sequence identity with nucleotides 1055-1212 of SEQ ID NO:1

(e) a sequence that shares at least 80% sequence identity with the reverse complement of nucleotides 58-214 of SEQ ID NO:1;

(f) a sequence that shares at least 80% sequence identity with nucleotides 854-1212 of SEQ ID NO:1;

(g) a sequence that shares at least 80% sequence identity with the reverse complement of nucleotides 58-429 of SEQ ID NO:1;

(h) a sequence that shares at least 80% sequence identity with SEQ ID NO:1;

(i) a sequence that shares at least 80% sequence identity with the reverse complement of SEQ ID NO:1;

(j) a sequence comprising nucleotides 1168-1212 of SEQ ID NO:1;

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(k) a sequence comprising the reverse complement of nucleotides 58-101 of SEQ ID NO:1;

(l) a sequence comprising nucleotides 1055-1127 and 1169-1212 of SEQ ID NO:1;

(m) a sequence comprising the reverse complement of nucleotides 140-214 of SEQ ID NO:1 and the reverse complement of nucleotides 58-101 of SEQ ID NO:1;

(n) a sequence comprising nucleotides 854-1212 of SEQ ID NO:1; and

(o) a sequence comprising the reverse complement of nucleotides 58-429 of SEQ ID NO:1.

2. (Currently amended) The isolated nucleic acid molecule of claim 1 wherein the PRU promoter additionally comprises ~~(e)~~ a sequence that shares at least 75%80% sequence identity with ~~SEQ ID NO:9 or SEQ ID NO:12~~ nucleotides 854-918 of SEQ ID NO:1 or the reverse complement of nucleotides 365-429 of SEQ ID NO:1.

3. (Original) The isolated nucleic acid molecule of claim 1 wherein the PRU promoter comprises nucleotides 1055-1212 of SEQ ID NO:1.

4. (Original) The isolated nucleic acid molecule of claim 3 wherein the PRU promoter comprises nucleotides 854-1212 of SEQ ID NO:1.

5. (Original) The isolated nucleic acid molecule of claim 4 wherein the PRU promoter comprises SEQ ID NO:1.

6. (Currently amended) The isolated nucleic acid molecule of claim 1 wherein the PRU promoter comprises the reverse complement of nucleotides 1043-119858-214 of SEQ ID NO:61.

7. (Currently amended) The isolated nucleic acid molecule of claim 6 wherein the PRU promoter comprises the reverse complement of nucleotides 827-1198-58-429 of SEQ ID NO:61.

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8. (Currently amended) The isolated nucleic acid molecule of claim 7 wherein the PRU promoter comprises the reverse complement of SEQ ID NO:61.

9. (Original) A plant expression vector comprising a chimeric construct comprising the isolated nucleic acid molecule of claim 1.

10. (Original) The plant expression vector of claim 9, wherein the PRU promoter is operably linked to a heterologous protein encoding sequence.

11. (Currently amended) The plant expression vector of claim 9 that comprises, ~~in the 5' to 3' orientation,~~ a first heterologous protein encoding sequence in the antisense direction, the PRU promoter, and a second heterologous encoding sequence in the sense direction, wherein the vector is double-stranded, and wherein the PRU promoter directs seed-associated expression of both the first and the second heterologous nucleic acid coding sequences.

12. (Original) A transgenic plant cell comprising a plant expression vector of claim 9 in its genome.

13. (Original) The plant cell of claim 12, which is from a plant belonging to the *Prunus* genus.

14. (Original) The plant cell of claim 13, which is from a plant selected from the group consisting of cherry, almond, peach, apricot, and plum.

15. (Original) The plant cell of claim 12, which is from *Arabidopsis*.

16. (Original) A method for producing a transgenic plant that exhibits seed-associated expression of a heterologous nucleic acid coding sequence, comprising:

a) transforming progenitor cells of the plant with a plant expression vector of claim 10, and

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b) growing the transformed progenitor cells to produce a transgenic plant that exhibits seed-associated expression of the heterologous protein encoding sequence.

17. (Original) A plant obtained by the method of claim 16.

18. (Original) The plant of claim 17, which belongs to the *Prunus* genus.

19. (Original) The plant of claim 18, which is selected from the group consisting of cherry, almond, peach, apricot, and plum.

20. (Original) The plant of claim 17, which is *Arabidopsis*.

21. (Original) A plant part obtained from a plant according to claim 17.

22. (Original) The plant part of claim 21, which is a seed.

23. (Original) Oil obtained from a plant of claim 17.

24. (Original) An isolated nucleic acid molecule comprising a PRU promoter from peach, apricot, plum or cherry, wherein the PRU promoter has a promoter sequence that is naturally located upstream of a translational start codon of a gene encoding a 12S globulin seed storage protein, and wherein the PRU promoter directs seed-associated expression of a heterologous nucleic acid coding sequence to which it is operably linked.

25. (Original) An isolated nucleic acid molecule comprising a PRU promoter, wherein the promoter has a promoter sequence that is naturally located upstream of a translational start codon of a chPru1 or chPru2 gene in the cherry genome, wherein the chPru1 gene comprises the sequence presented as SEQ ID NO:2, and wherein the chPru2 gene comprises the sequence presented as SEQ ID NO:3.

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26. (Original) A nucleic acid molecule of claim 2 that hybridizes under high stringency conditions to the nucleic acid molecule having the sequence of SEQ ID NO:1, or the complement thereof.